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Kondo

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[54] **COMPACT HAVING AN ILLUMINATOR**

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[30] **Foreign Application Priority Data**

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Mar. 9, 1990 [JP] Japan ..... 2-23918[U]

[51] **Int. Cl.**[5] **F21V 33/00**
[52] **U.S. Cl.** **362/135**; 362/137; 362/154
[58] **Field of Search** 362/154, 156, 135, 136, 362/137

[56] **References Cited**

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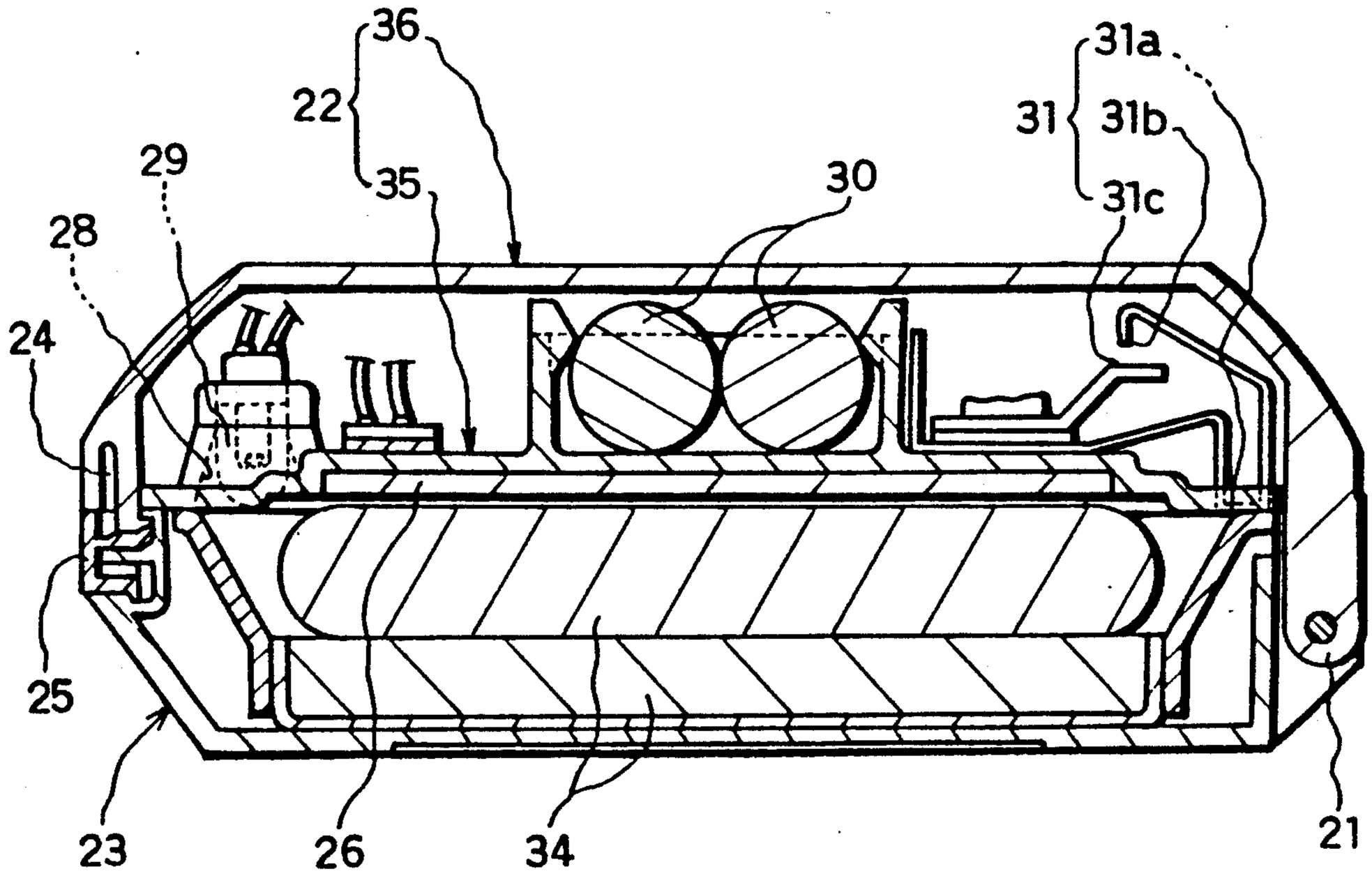
Attorney, Agent, or Firm—Bauer & Schaffer

[57] **ABSTRACT**

An illuminated compact having an upper case provided with an illuminator and a mirror and a lower case accommodating a variety of cosmetics. When the upper and lower cases are opened, the illuminator is automatically turned on, thereby making it possible to make up the face even in a dark place. The illuminator is provided with means whereby light irradiates the entire face of the user. The illuminator is automatically turned off when the upper and lower cases are closed.

2 Claims, 7 Drawing Sheets



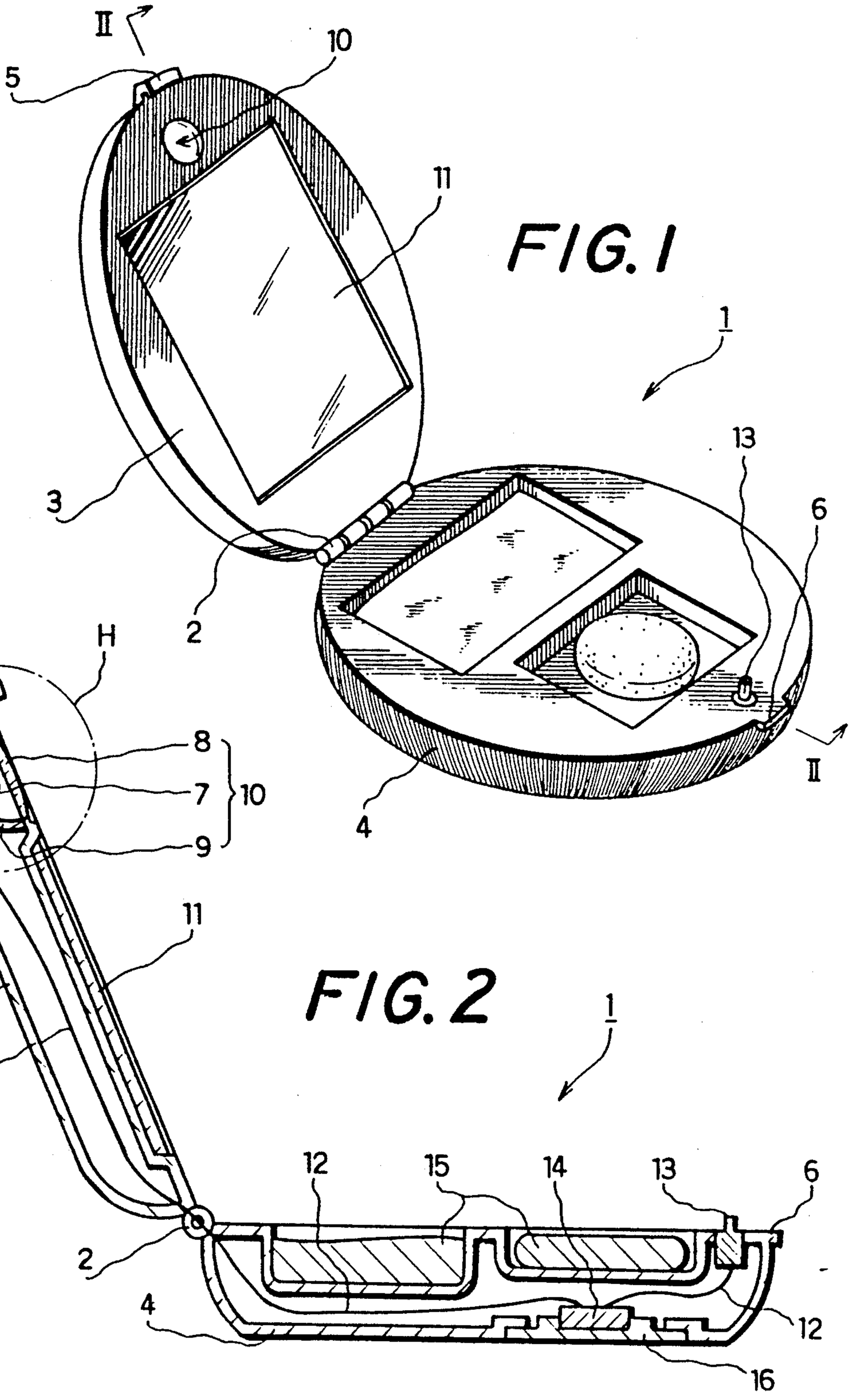


FIG. 1

FIG. 2

FIG. 3(a)

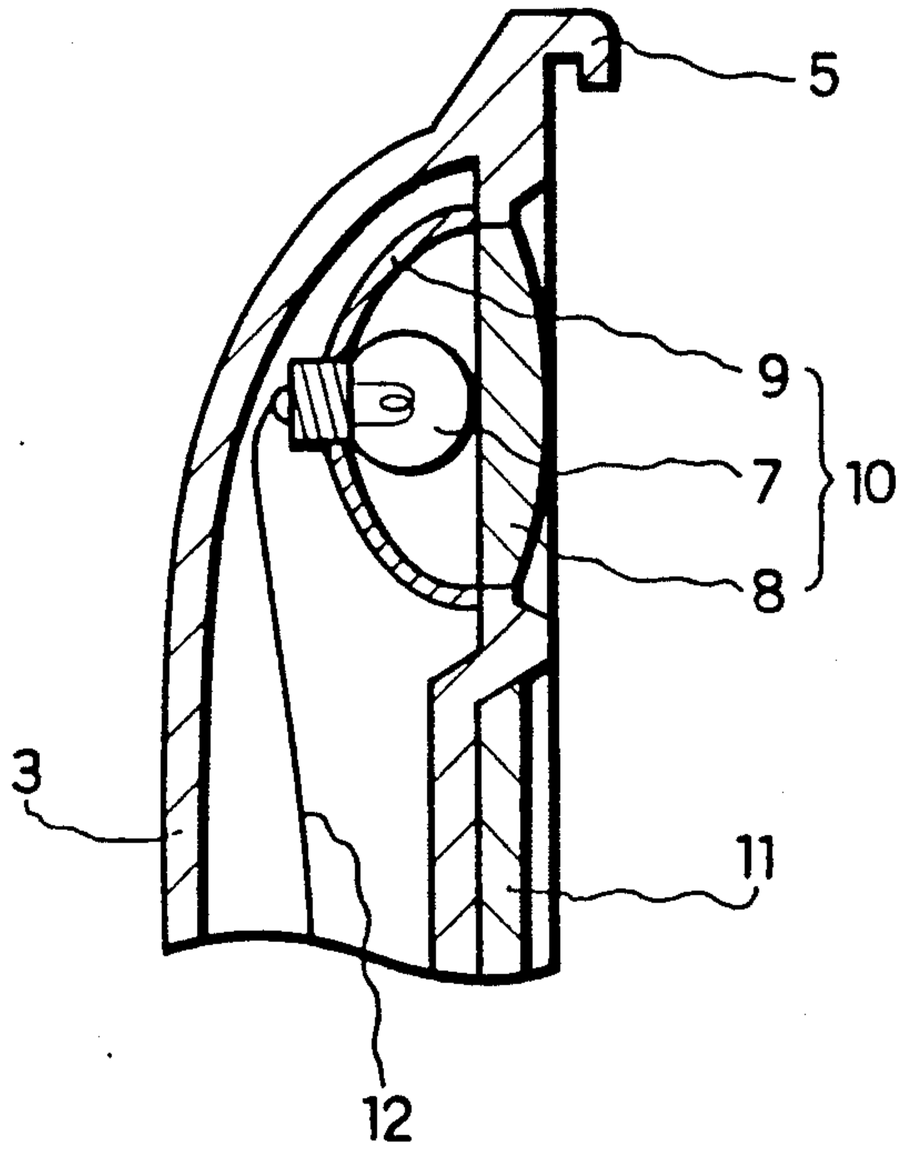


FIG. 3(b)

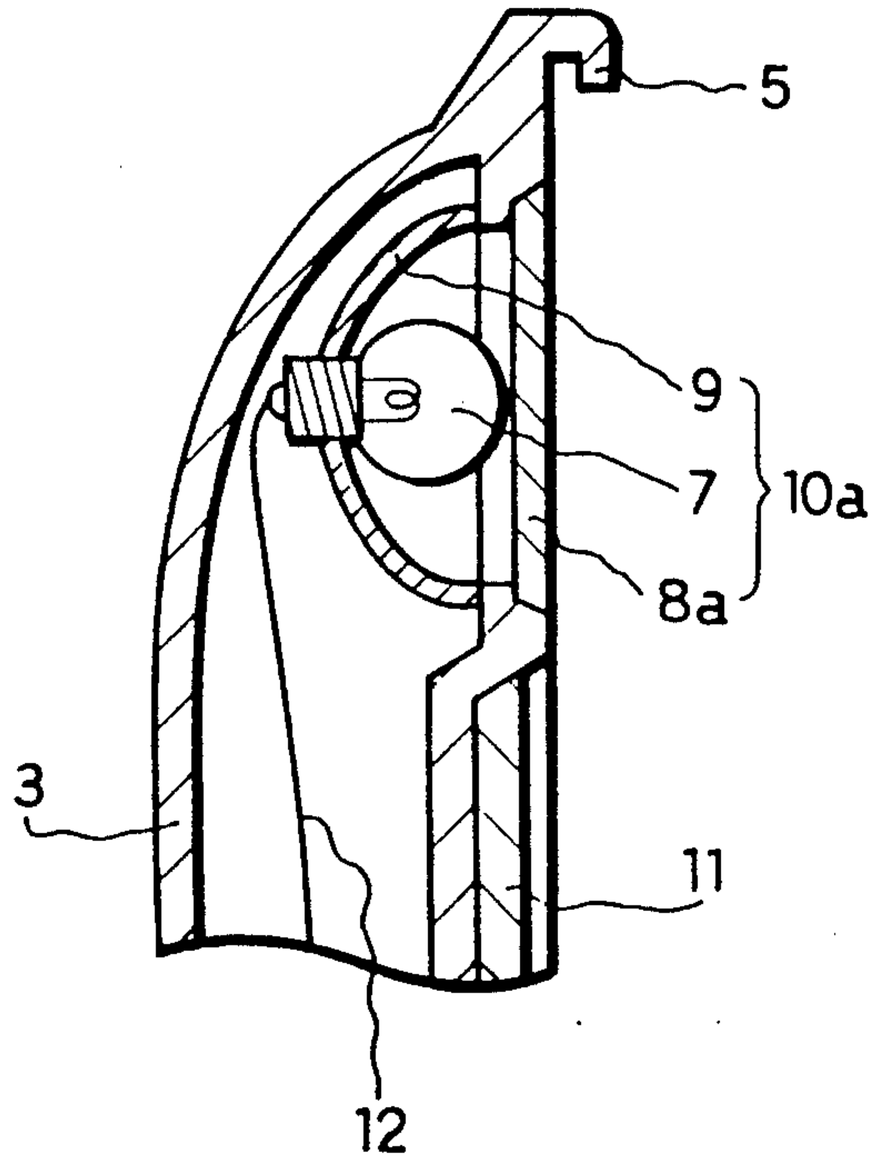


FIG. 4

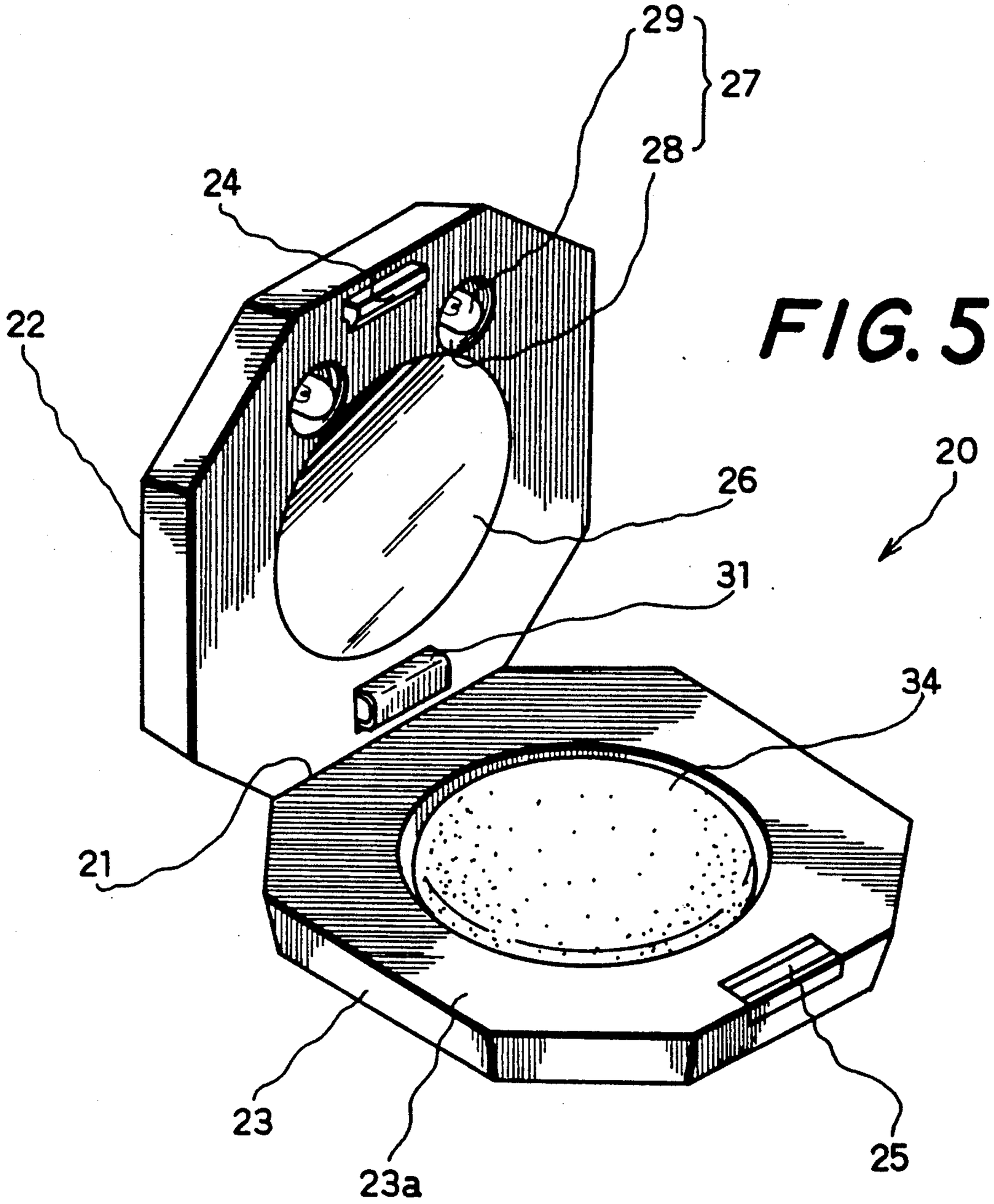


FIG. 5

FIG.6

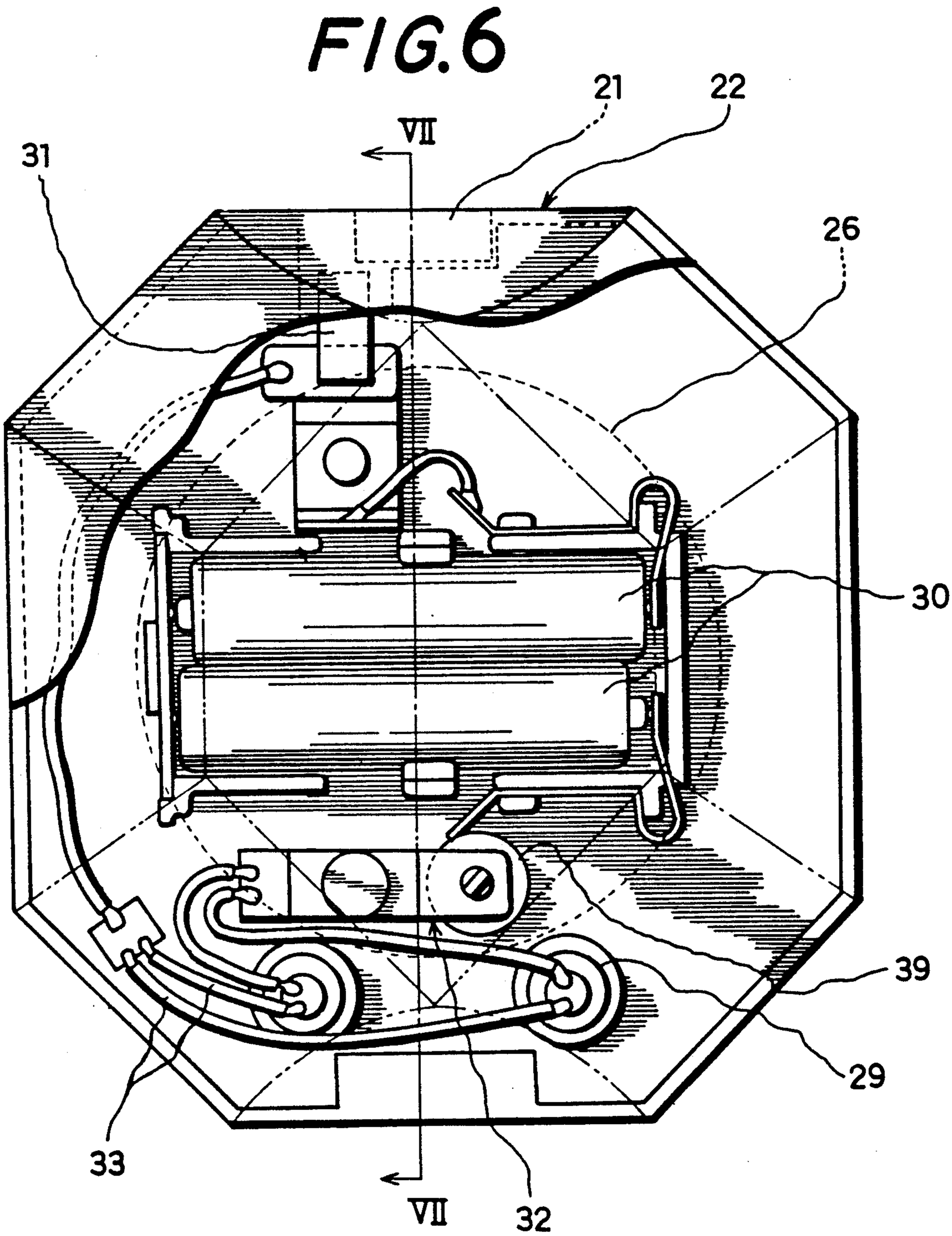


FIG. 7

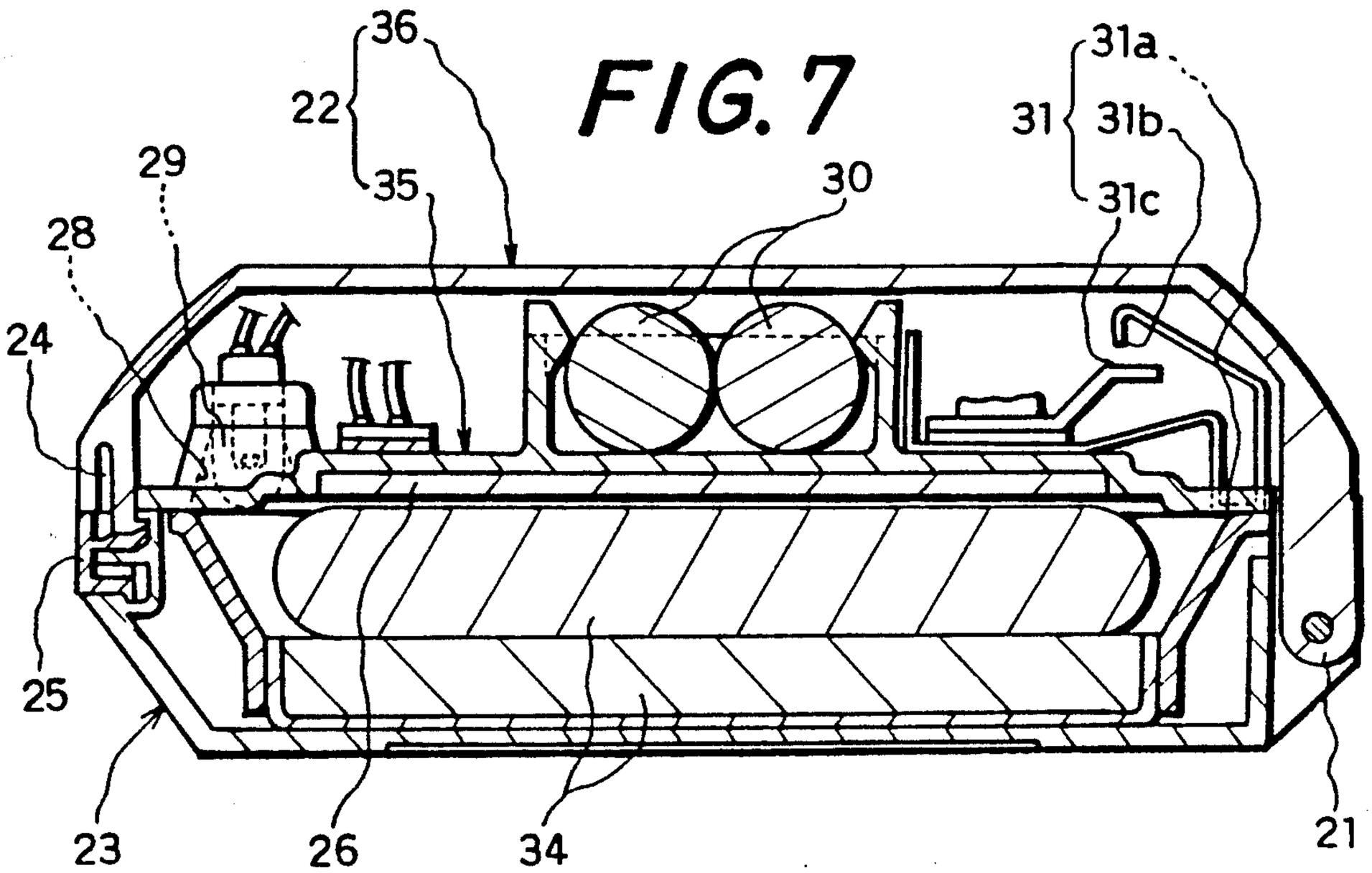
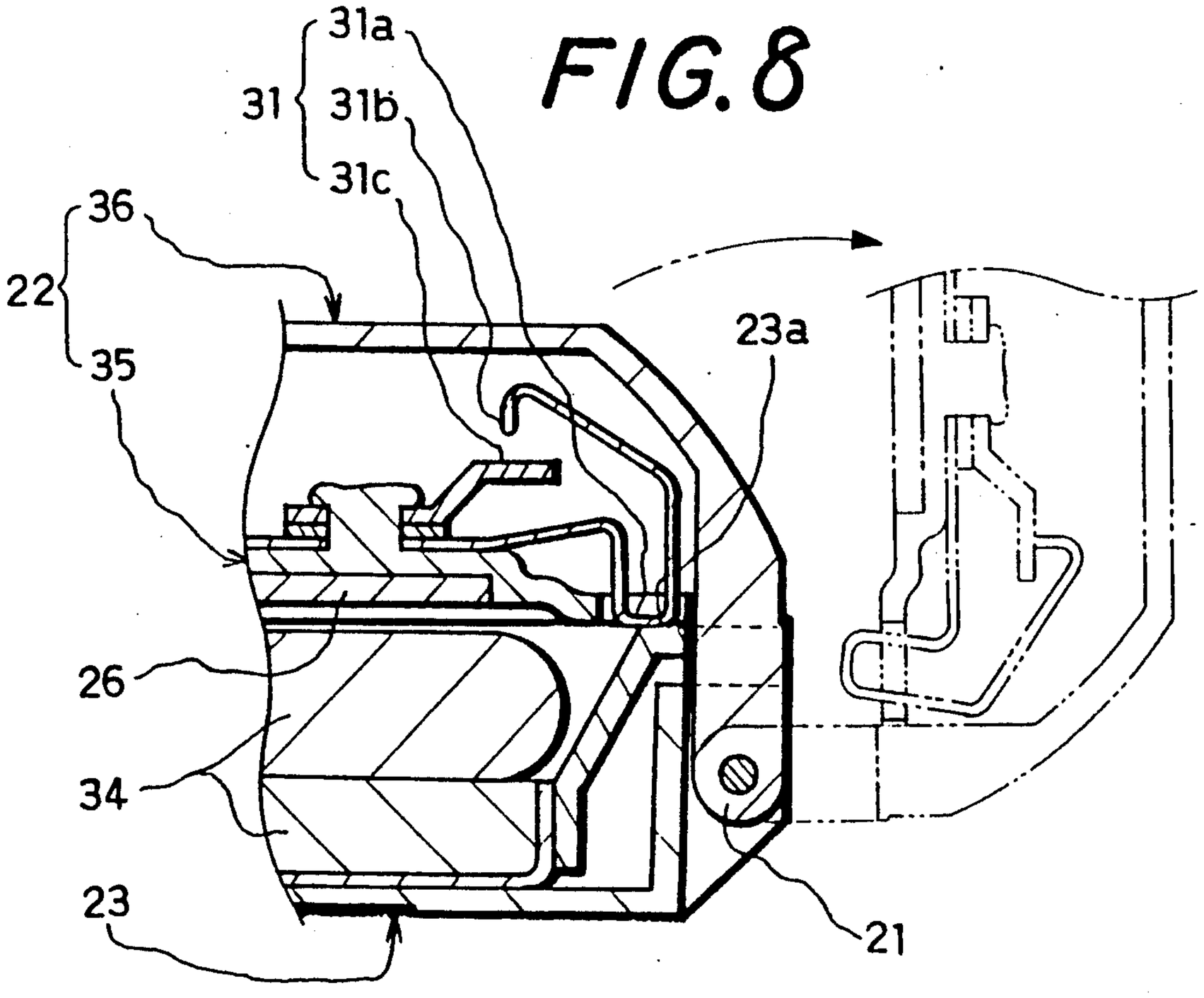

36
22
35
29
28
24
25
23
26
34
30
31a
31
31b
31c
21

FIG. 8


31a
31
31b
31c
36
22
35
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23a
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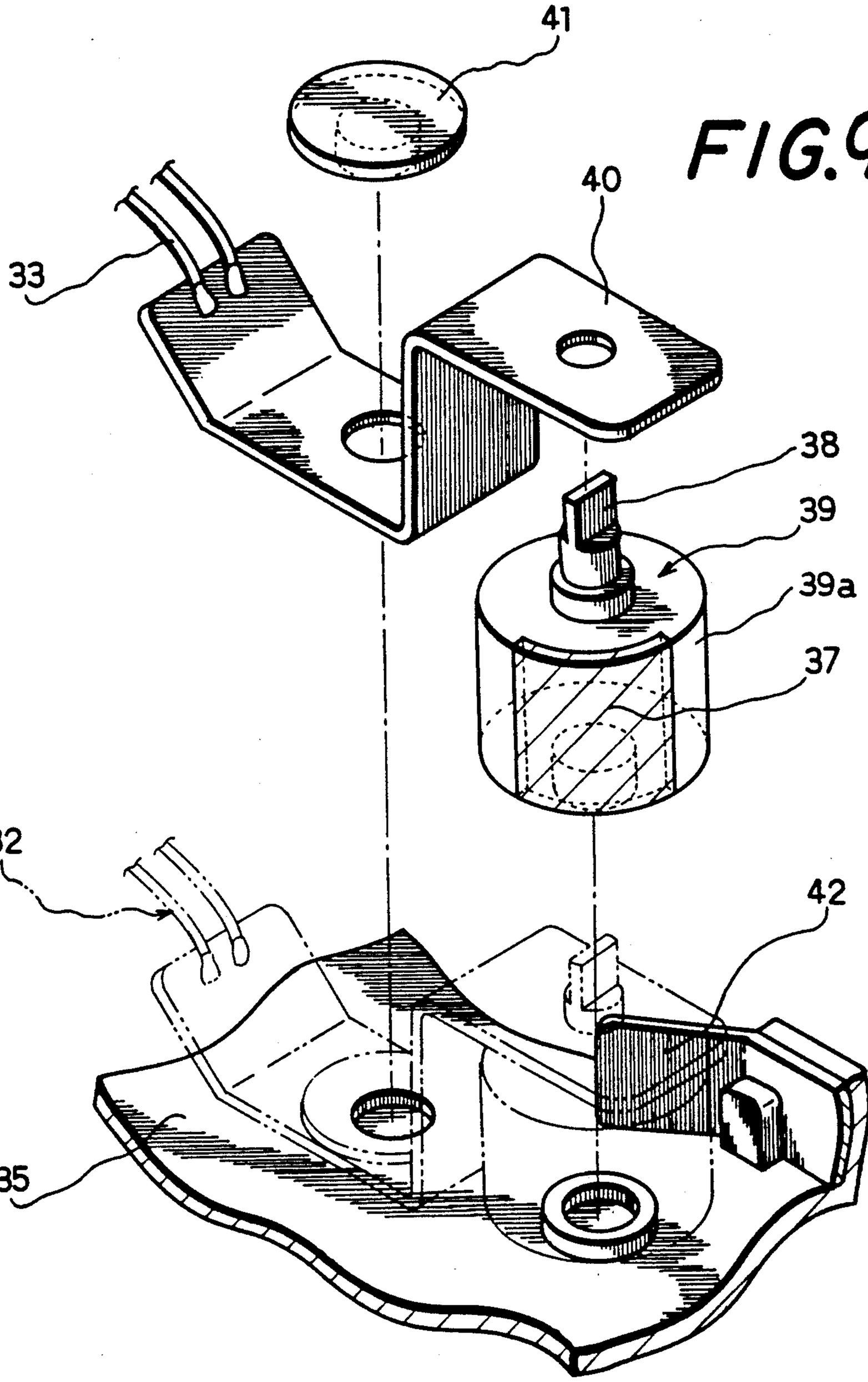
FIG.9(a)



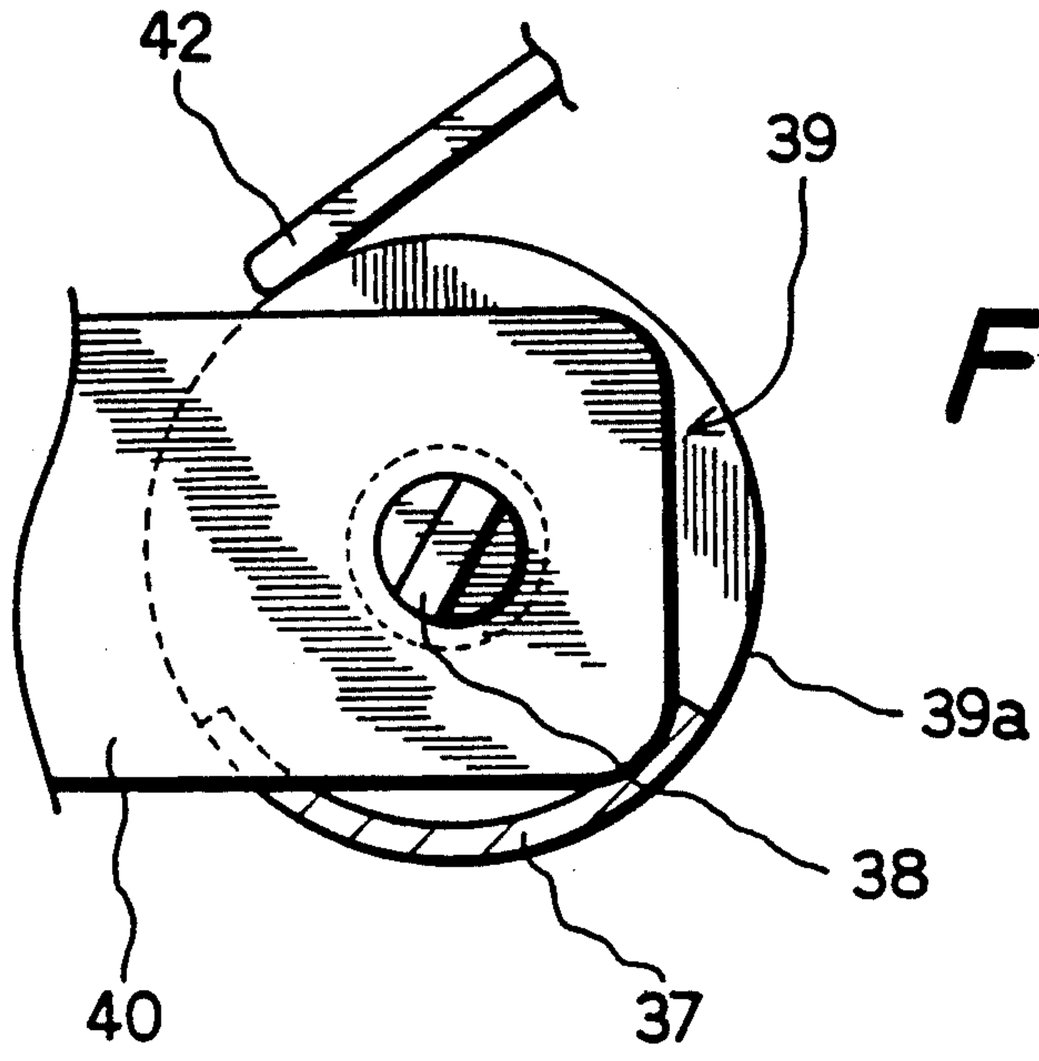
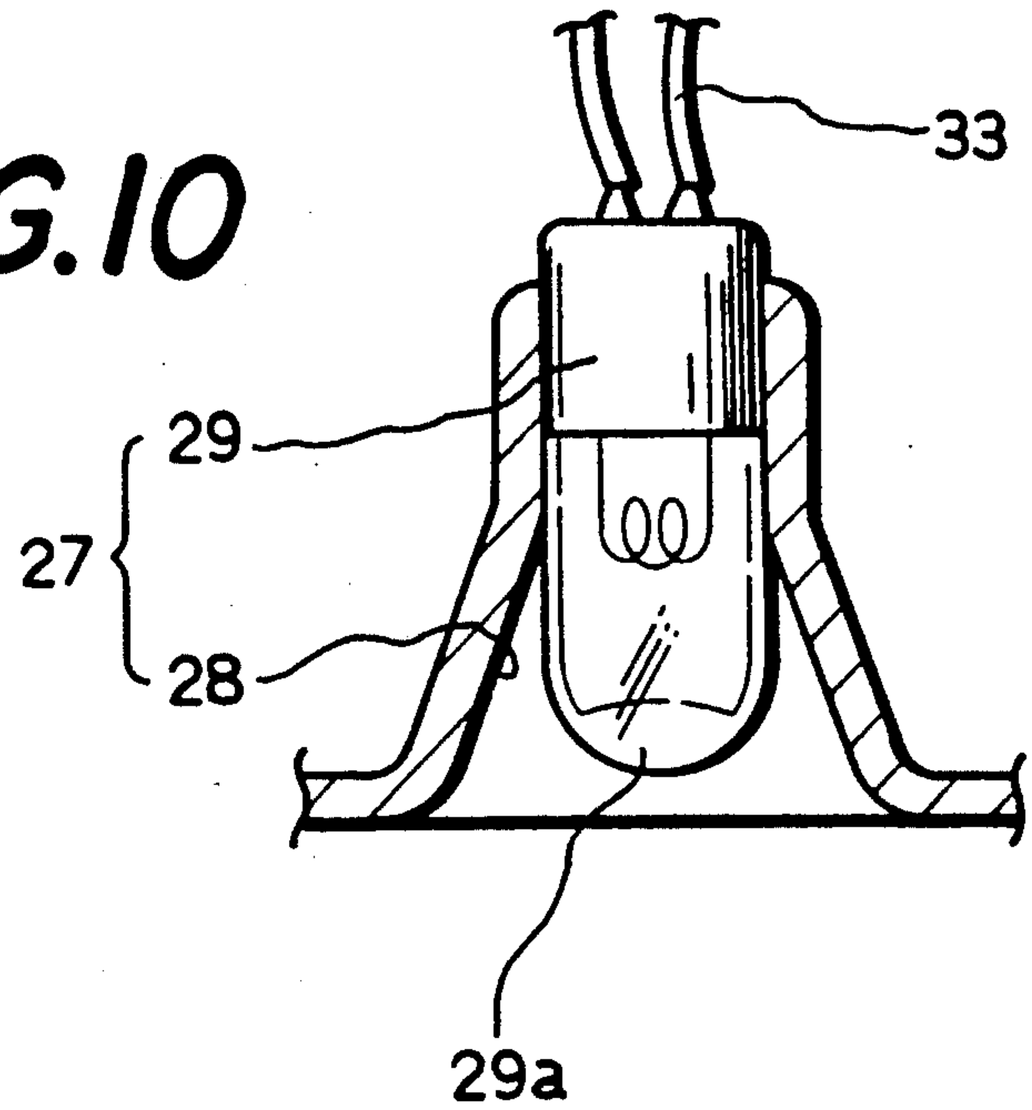


FIG.9(b)

FIG.10



COMPACT HAVING AN ILLUMINATOR

BACKGROUND OF THE INVENTION

1. Filed of the Invention

The present invention relates to a portable compact for makeup, and more particularly, to a compact having an illuminator which allows a person to make up the face even in a dark situation such as at night.

2. Description of the Prior Art

A conventional portable compact for. makeup consists mainly of an upper case having a mirror fixed typically on the bottom side thereof and a lower case in which a variety of cosmetics are contained. These upper and lower cases are hinged so as to be freely opened and closed. Also such compact is provided with a stopper means for maintaining the upper and lower cases in a closed state.

Such conventional portable compact must be used, as an absolute condition, in a situation where the face and its surroundings, of a person who is going to make up the face, is sufficiently lighted so as to be clearly reflected in a mirror arranged in the upper case of the compact. Therefore, the above. mentioned conventional compact does not allow a person to make up even during the daytime if she is in a place where her face is not sufficiently lighted. In some cases, it is impossible to make up with such conventional compact unless the face is lighted by a illumination or the like.

OBJECTS AND SUMMARY OF THE INVENTION

In view of the above inconvenience, it is an object of the present invention to provide a compact having an illuminator which permits a person to make up the face even in a dark situation, e.g. at night

To achieve the above object, the present invention provides an illuminated compact comprising a compact body formed of an upper case and a lower case. A light transmittable element is provided for transmitting the light emitted from an illuminating lamp to the face of the user. A switch for automatically turning on and off the illuminating lamp, operable upon opening and closing the upper case and the lower case, is provided. In addition, a mnul switch is included to enable long term storage of the compact without drainage of the battery.

The above and other objects, features and advantages of the present invention will become apparent from the following detailed description of the preferred embodiment taken in conjunction with the accompanying drawings, throughout which like reference numerals designate like elements and parts.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective view showing an embodiment of a compact having an illuminator according to the present invention;

FIG. **2** is a cross-sectional view taken along a line II— II in FIG. **1**;

FIGS. **3***a* and **3***b* ar are enlarged cross-sectional views respectively showing a main portion of the compact having an illuminator;

FIG. **4** is a perspective view showing how the compact having an illuminator is used;

FIG. **5** is a perspective view showing another embodiment of a compact having an illuminator of the present invention;

FIG. **6** is a top plan view of the compact having an illuminator;

FIG. **7** is a cross-sectional view taken along a line VII— VII in FIG. **6**;

FIG. **8** is an enlarged cross-sectional view of an automatic switch employed in the compact having an illuminator of the present invention;

FIG. **9***a* is a perspective view showing how the automatic switch is assembled;

FIG. **9***b* is a plan view showing how the automatic switch is operated; and

FIG. **10** is a side view of an illuminator employed in the compact of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

A first embodiment of the present invention will now be explained with reference to FIGS. **1** through **4**.

In these drawings, a compact body **1** comprises an upper case **3** and a lower case **4** which are coupled by a hinge **2**. The upper and lower cases **3**, **4** are respectively provided with a hook **5** and detent **6** which are engaged and disengaged for closing and opening the upper and lower cases **3**, **4**. The upper case **3** is also provided with a illuminating lamp **7**, an illuminator comprising a light transmittable element **8** and a reflector **9**, a mirror **11** and a wire **12** accommodated therein. In the lower case **4** there are accommodated a battery (e.g. a mercury battery) **14** and a variety of cosmetics **15**. An automatic switch **13** is arranged so as to be turned off when the upper and lower cases **3**, **4** of the compact body **1** are closed and thereby an end of the automatic switch **13** hits against the upper case **3** and turned on when the compact body **1** is opened. In other words, the upper and lower cases **3**, **4** are opened by disengaging the hook **5** and the detent **6**, and at the same time the automatic switch **13** is turned on to automatically light the illuminating lamp **7**. The lower case **4** is provided at its bottom surface with a removable container **16** in which the battery **14** is accommodated.

The illuminator **10**, as mentioned above, comprises a light transmittable element **8** attached between the mirror **11** and the hook **5** in the upper case **3**, and the illuminating lamp **7**, disposed in the upper case **3**, is provided with a reflector **9**. A light emitted from the lit illuminating lamp **7** is converged or diffused to the light transmittable element **8** by the reflector **9**. The light transmittable element **8** employed in the present embodiment is a lens as shown in FIG. **3***a* which may be a concave or convex one which allows the light reflected by the reflector **9** to irradiate the face satisfactorily. A concave lens converges the beam once converged or diffused by the reflector **9**. A convex lens diffuses the beam so as to irradiate the entire face.

The illuminator **10***a* as shown in FIG. **3***b* employs a plane light transmittable element **8***a* through which a diffused light beam by the reflector **9**, adjusted so as to diffuse the light beam from the illuminating lamp **7**, irradiates the entire face in the same manner as the case where a concave or convex lens is employed as the light transmittable element **8**. The light beam from the illuminating lamp **7** can irradiate the entire face by the action of the reflector **9** and the light transmittable element **8** or only the reflector **9**. Incidentally, a wire **12** is illustrated in the form of a line in FIG. **2**, in which plus and minus poles are omitted for the sake of simplicity.

Next, another embodiment of the present invention will be explained with reference to FIG. **5** through **10**.

In these drawings, a compact body **20** comprises an upper case **22** and a lower case **23** which are coupled by a hinge **21**. The upper and lower cases **22, 23** are respectively provided with a hook **24** and a dent **25** which are engaged and disengaged to close and open the upper and lower cases **22, 23**. The upper case having a mirror **26** is also provided with an illuminator **27** which comprises an illuminating lamp **29** with a reflector **28**. Further, the upper case **22** has a battery **30**, an automatic switch **31** and a manual switch **32**, electrically connected with one another through a wire **33**. In the lower case **23**, there are accommodated a variety of cosmetics **34**. The upper case **22** consists of a removable cover **35** and a case body **36**, i.e. it has a so-called separable double structure, so that the cover **35** can be removed from the case body **36** to allow operations of the manual switch **32** and replacement of the battery **30** and the illuminating lamp **29** to be easily achieved. The battery **30** may be a mercury battery in place of a conventional dry battery.

The automatic switch **31** is arranged to be turned off when the compact body **20** is closed, wherein an end **31***a* of the automatic switch **31** hits against an edge **23***a* of the lower case **23**. By this action, the end **31***a* is lifted to disconnect the contacts **31***b* and **31***c* from each other and consequently turn off the automatic switch **31**. When the compact body **20** is opened, the lifted end **31***a* is repositioned to the previous position by its elasticity, so that the contacts **31***b* and **31***c* are connected to thereby turn on the automatic switch **31**.

The manual switch **32**, as shown in FIG. **9***a*, is provided with a cylinder **39** rotatable by manually rotating an associated knob **38**, and an electrode plate **40** which has one end connected to a code **33** connected with the battery **30** and the other end attached to the rotatable cylinder **39**. The cylinder **39** has a conductive circumferential portion **39***a* and an insulating circumferential portion **37** for interrupting a current. The manual switch is attached to the cover **35** of the upper case **22** by a fixing bolt **41**. It is therefore necessary to first remove the cover **35** from the case body **36** of the upper case **22** to operate the manual switch **32**. Since the conductive portion **39***a*of the rotatable cylinder **39** and the electrode plate **40** are made of conductive material, the manual switch **32** is turned on when a terminal **42** connected with the battery **30** comes into contact with a conductive portion, **39***a* of the cylinder **39**, whereby a current flows through the wire **33** connected to the electrode plate **40** from the rotatable cylinder **39**. On the contrary, the manual switch **32** is turned off if the terminal **42** is contacted with the insulating portion **37** by rotating the cylinder **39** by the knob **38**.

Incidentally, the illuminator **27** employed in the present embodiment is such one, as shown in FIG. **10**, that has a lens **29***a* as a glass member of the illuminating lamp **29**, in place of the light transmittable element **8** of FIG. **3**. However, the illuminators **10**, **10***a* as shown in FIG. **3** may be employed instead, in which case the same operation and effects can be produced as the previously mentioned case.

What is claimed is:

1. An illuminated compact for use in applying cosmetics to a user's face, operable automatically on opening and closing the compact, said compact comprising a body formed of an upper case and a lower case, said upper case having an illuminating lamp, a reflecting means for collecting light emitted from said lamp, and a light transmittable element diffusing the collected light, said light transmittable element irradiating said light onto the face of the user, and said lower case having a place for accommodating one or more of a variety of cosmetics, said upper case having a removable cover and an automatic switch, a battery, and a manual switch placed therein, said manual switch comprising a cylinder rotatable by manually rotating a knob and having an insulating portion for interrupting an electrical current, and an electrode plate, one end of which is coupled to the battery and the other end of which is coupled to said rotatable cylinder.

2. The compact according to claim **1**, wherein the light transmittable element comprises a lens.

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